VistARad
Template & Hanging Protocol
Quick Start Guide

Version 3.0, Patch 18
April 2006

Department of Veterans Affairs

Template & Hanging Protocol Quick Start Guide
Vista Imaging 3.0 Patch 18
April 2006

VistA Imaging Health Systems Software Design & Development
Department of Veterans Affairs
1335 East-West Highway 3rd Floor
Silver Spring, MD 20910
(301) 734-0100

Contents

Revision Table

Date	Rev	Notes/Author/PM
Feb 27 2006	.9	Initial draft of content pulled from VistARad Quick Start Guide. Expanded and revised. A. McFarren, J. Christensen.
Apr 3 2006	1.0	Updated for release of patch 18. A. McFarren, J. Christensen.

Introduction

This document provides an overview of templates and hanging protocols. It is intended for Imaging Coordinators and advanced VistARad users. This document also provides steps for creating and working with a sample templates and hanging protocols.

It is assumed that:

- Users of this document are familiar with the Windows environment.
- The Patch 18 client is installed on a Windows XP-based diagnostic workstation.
- The Patch 18 KIDS is installed and configured on the VistA Host.
- Appropriate test exams are available.

Before you Begin

This document covers release 3.0, Patch 18 the VistARad client and host software. Software version numbers can be displayed by going to the Viewer window and clicking **Help** | **About**.

Note The Patch 18 and Patch 32 versions of the VistARad client software can be installed and used on the same workstation, but both clients cannot be run at the same time.

Terms of Use

The use of the VistARad diagnostic workstation is subject to the following provisions:

Caution: Federal law restricts this device to use by or on the order of either a licensed practitioner or persons lawfully engaged in the manufacture or distribution of the product.

No modifications may be made to the VistARad diagnostic workstation without the express written consent of the VistA Imaging National Project Manager.

The Food and Drug Administration classifies the VistARad software as a medical device. Modifications to the VistARad diagnostic workstation, such as the installation of unapproved software, will adulterate the medical device. The use of an adulterated medical device violates US federal law (21CFR820).

Image presentation quality depends on monitor resolution, which must be suitable for rendering the types of images to be displayed, and on regular monitor testing and calibration, which correct for display degradation over time. It is the responsibility of the clinical practitioner to determine if images presented on a VistARad workstation are of sufficient quality for clinical interpretation. Any concerns regarding monitor resolution or calibration should be reported immediately to the Imaging Coordinator before interpretation is performed.

For more information, refer to the "ACR Standard for Digital Image Data Management" and " ACR Standard for Teleradiology." These documents are located at www.acr.org, under Publications/Products | Standards.

Support

If you encounter any problems using VistARad, contact your local Imaging Coordinator or support staff. If the problem cannot be resolved locally, use Remedy to place a service request, or contact the National Help Desk between 8:00AM and 6:00PM Eastern time, Monday through Friday, at 1-888-596-4357.

Urgent after-hours service requests can be directed to the Expertise Center at 1-800-299-7282.

Template and Hanging Protocol Basics

Templates Defined

A template is a named definition of a specific arrangement of viewports. Templates are used as the basis of hanging protocols. Templates are used automatically when a hanging protocol is applied to an exam being opened.

You can also open an exam with a template only. Opening an exam with a template only is most frequently done as the first step of creating a new hanging protocol.

Hanging Protocols Defined

A hanging protocol automates tasks related to displaying exams. When a hanging protocol is applied, it will:

- Locate priors
- Load images from current and prior exams into viewports
- Apply pre-defined image display settings in each viewport

Hanging protocols are typically selected automatically when an exam is opened. A user can also manually select a hanging protocol before opening an exam.

The settings under **View | Settings | Hanging Protocol** govern general hanging protocol behaviors. You can:

- Enable or disable automatic display of priors and related exams for unread or completed exams. If these options are disabled, any prior or related exam search logic in a hanging protocol definition is ignored.
- Elect to be notified if there is a more recent unread exam for a patient than the one you select for display. The determination of what qualifies as a "more recent unread exam" can be based on exact or similar CPT matching.

Types of Templates and Hanging Protocols

Default (*SYS_INT) Templates and Hanging Protocols

VistARad is installed with a collection of default templates and hanging protocols Default templates and hanging protocols are identified by the "SYS_INT" suffix in their names. These templates and hanging protocols are used for basic system operations and cannot be altered or deleted. (They can, however, be used as the basis of other templates or hanging protocols.)

Pre-defined Templates and Hanging Protocols

VistARad is also installed with a collection pre-defined templates and hanging protocols for standard modalities and monitor configurations (2-head, 4-head, etc.). These default templates and hanging protocols are associated with VistARad's 'sysAdmin' user.

Any user can use pre-defined templates and hanging protocols to display exams. Pre-defined templates and hanging protocols can also be copied and used as the basis of new templates and hanging protocols.

Pre-defined templates and hanging protocols can be edited or deleted by users with the MAGJ SYSTEM USER key

User-defined Templates and Hanging Protocols

Each VistARad user can define their own collection of templates and hanging protocols. A user with the MAGJ SYSTEM USER key can also define 'site-level' templates and hanging protocols. Site-level templates and hanging protocols are associated with VistARad's 'sysAdmin' user.

User-defined templates and hanging protocols can only be deleted by the user that created them. Site-level templates and hanging protocols can only be edited or deleted by users with the MAGJ SYSTEM USER key.

Hanging Protocol Selection

Unless a user takes explicit action, a hanging protocol is automatically selected when an exam is opened. Users can also manually select a hanging protocol.

Automatic Selection

A hanging protocol definition includes one or more CPT codes (i.e., procedures) and/or a modality type. A hanging protocol is also associated with a template. The template specifies both the viewport arrangement in the viewer and the size, aspect ratio, and resolution of the viewer window.

For a hanging protocol to be automatically selected, its CPT (procedure)/modality information must match the procedure and/or modality of the exam being opened. The hanging protocol's associated template must also be compatible with the current state of the viewer window.

Because there are user-defined, pre-defined, and default (SYS_INT) hanging protocols present in a typical VistARad environment, there are typically multiple hanging protocols that are 'compatible' with a given exam. When this occurs, the following logic is used to select the best match:

- Exact CPT matches take precedence over similar (group) CPT group matches. CPT group matches take precedence over modality matches.

- A user's own hanging protocols take precedence over site-level (sysAdmin) hanging protocols. sysAdmin hanging protocols take precedence over default (SYS_INT) hanging protocols.

If VistARad cannot choose between matching hanging protocols based on precedence (such as when there are two user -defined hanging protocols associated with the same procedure), the user will be notified and asked to select the most appropriate hanging protocol.

If no matches are found, the most appropriate default (SYS_INT) hanging protocol will determine the viewport layout in the Viewer window.

Note that if the user opens more than one exam simultaneously, the most recent unread exam is used as the basis of automatic hanging protocol selection. If all of the selected exams have been interpreted, the most recently interpreted exam is used for automatic hanging protocol selection.

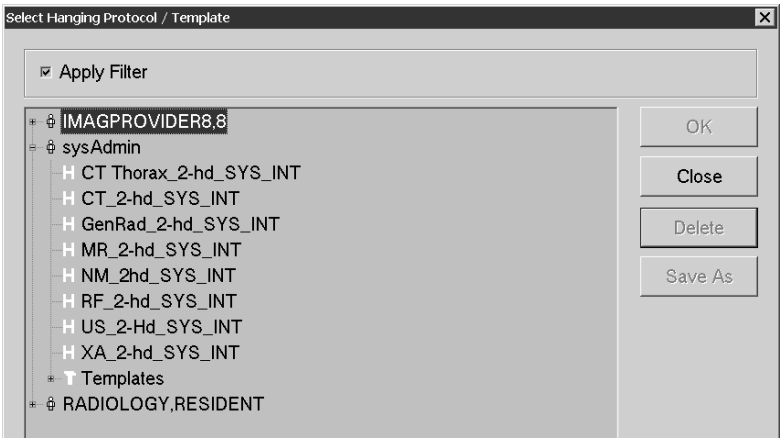
Note that the use of a matching hanging protocol does not guarantee that all images are loaded into viewports. For example, if a CT exam with four series is matched to a hanging protocol designed to accommodate exams with only two series, not all series will be loaded into the Viewer automatically.

Manual Selection

Users can manually select a hanging protocol using the **Open With** button in the manager. For detailed steps, refer to the *VistARad Quick Start Guide*.

Hanging Protocol / Template Collections

In the Select Hanging Protocol/Template dialog, hanging protocols and templates are grouped by the username. Each user can open exams using one of their hanging protocols, or they can choose a hanging protocol from any other user's collection (including the sysAdmin user's).



Filtering

By default, only hanging protocols and templates that are appropriate for the current state of the Viewer window (size, number of monitors, and aspect ratio) are displayed in the

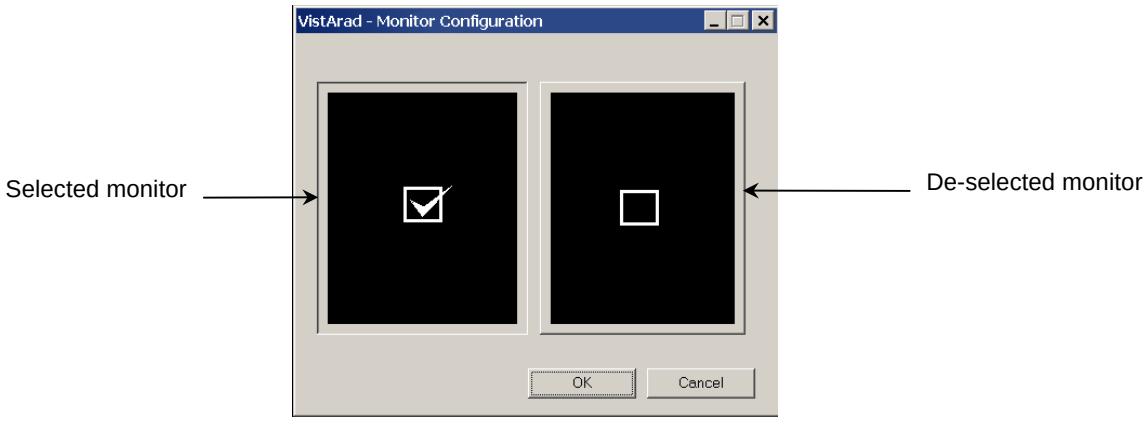
Select Hanging Protocol/Template dialog. Clearing the **Apply Filter** check box will list all templates and hanging protocols defined at the site.

Viewer Window Sizing

The size of the Viewer window is one of the main factors that determine which hanging protocols and templates are available for either automatic or manual selection. The Viewer window can be sized to occupy some or all of the available monitors.

To set the size of the Viewer window:

1. Close all open exams.
2. In the Viewer window toolbar, click  .
3. In the dialog that displays, select which monitors to use.



Note that the Viewer window cannot be resized by dragging its boundaries, and the Viewer window cannot be sized to occupy only part of a monitor.

Templates

Creating a Template

The following steps explain how to create a template that will divide the display area into a total of four viewports. The use of a 2-head workstation is assumed.

1. In the Viewer menu, click **Customize | Template Designer**. The standard Viewer toolbar will be replaced by the template designer bar
2. Click the **New** button in the template designer bar.
3. In the leftmost monitor, click in the display area (the dark part of the screen). A box similar to the standard layout control will display
4. Drag the mouse to set the layout to two rows, one column. The box will close automatically.
5. Repeat the steps for the second monitor. The display space is now divided into four viewports, two per monitor.
6. When you are finished, click **Save**.
7. Enter the name of the template in the Create Template dialog.
8. If the **Level** box is enabled, select User-level or Site-level. For more information, see *User-defined Templates and Hanging Protocols* on page 4.
9. Click **OK** in the dialog, then click **Close** to exit the template designer.

Editing Templates

There are two ways to select an existing template for editing.

- If the template is being used in the Viewer window, click **Customize**. Then, depending on if the template is being used by a hanging protocol, click **Edit Template** or **Copy/Edit Template**.

  Note If the template you selected is being used in a hanging protocol definition, or if the template is a default template, only the Copy/Edit Template option will be enabled. Edits made to the template will have to be saved to a new template.

- If the template is not active, open the Template Designer, click **Edit**, and then select the template from the dialog that is displayed.

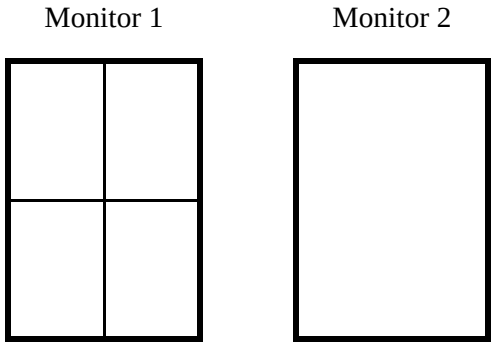
Template Designer Details

This section provides more detail about how the template designer works.

Dividing the Display Area into Viewports

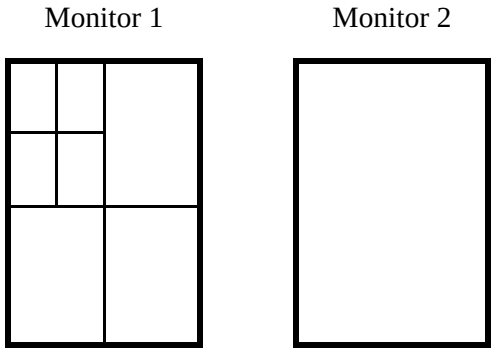
The “layout box” described in the previous section is used to subdivide the display area into smaller sections which become viewports when the template is saved.

For example: On a two-head workstation, if you use the layout box to specify a layout of 2 x 2, the display will look like:



Saving the template at this point would result in a template with five viewports: four on the left and one on the right.

If you want to subdivide the display area further, you could click again inside the top left viewport and use the layout box to specify a layout of 2 x 2 again. The display would then look like:



Saving the template this point would result in a template with eight viewports: seven on the left and one on the right.

Making Asymmetric Viewports

You are not limited to proportional layouts in the template designer. If you want to, you can create non-proportional layouts by dragging the boundary lines that separate each viewport.

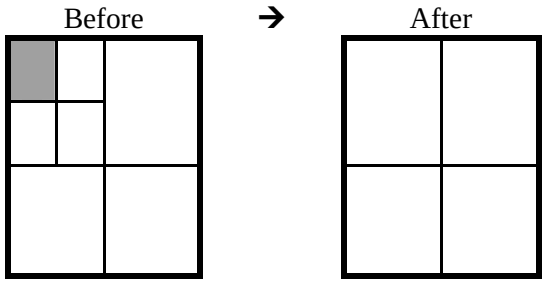
If you drag a line completely off the edge of a screen, the gridline is deleted.

Combining and Deleting Viewports

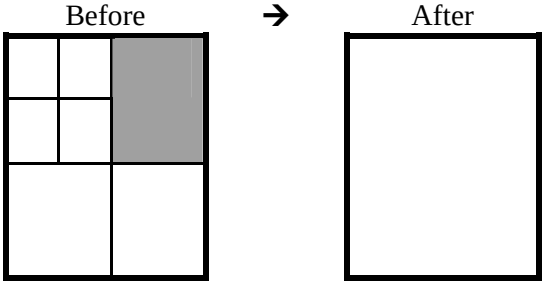
You can delete viewports in the template designer using any of the following methods:

- To delete the boundary between two viewports, drag the boundary past the "outside edge" of the screen.
- To combine all viewports on a screen into a single viewport, right-click anywhere on the screen and click **Clear Screen**.
- To delete boundary lines around a particular viewport, point inside the viewport, right-click, then choose **Delete Grid**. The examples below demonstrate how the viewport you select affects the scope of the operation:

Example 1: If **Delete Grid** is selected from the viewport on the top left, the gridlines around it are removed, leaving four viewports on the screen.



Example 2: If **Delete Grid** is selected from the viewport on the top right, the gridlines around it are removed, leaving one viewport on the screen.



Making Multi-screen Viewports

When you create a new template, the display area is initially set to one viewport per screen. To create a viewport that spans more than one screen, right-click in the viewport and click **Merge Left** or **Merge Right**.

- Each operation extends the viewport one screen to the left or right. You can repeat the operation as many times as there are available screens.
- To revert back to one viewport per screen, right-click in the extended viewport and choose **Undo Merge**.

When multi-screen viewports are used to display images, their layout is automatically set to 1 x *n*, where *n* is the number of screens that the viewport extends across.

Screen Templates

A screen template is a saved arrangement of viewports for a single monitor only. You can use screen templates to automate template creation.

Creating Screen Templates

1. Use the template designer to create an arrangement of viewports on a single screen.
2. On the screen in question, right-click and choose **Save As Screen Template**.
3. Enter the name of the screen template, then click **Create**.

Applying Screen Templates

1. Start the template designer, click **New** to create a new template, or click **Edit** and select a template for editing.
2. On the screen that you want to add the screen template to, right-click and choose **Insert Screen Template**.
3. In the dialog that appears, select the screen template you want to use, then click **Insert**.

Hanging Protocols

Defining a hanging protocol involves:

1. Using exams and a template to 'model' what the hanging protocol will do. You can do this by opening exams with a template and arranging images in viewports manually, or by using an existing hanging protocol and then modifying the view as desired.
2. Opening the Define Hanging Protocol dialog and verifying that the values derived from the model exams are set as desired. Values are checked on a viewport-by-viewport basis, and can be adjusted if necessary.
3. Testing the new hanging protocol to make sure that it works as expected.

The following sections explain how to create and edit sample hanging protocols. The first two sections explain how to do this 'from scratch'. The next two sections explain how to work with existing hanging protocols.

Defining a Hanging Protocol I (CR_1view_priors1up)

The steps below explain how to create a hanging protocol for CR (x-ray) exams. The completed hanging protocol will display a current CR exam on one monitor and one or more prior exams on a second monitor. The use of a 2-head workstation is assumed.

To create this hanging protocol, you will need two CR exams from the same patient that have the same procedure and body part.

1. Create a new template where each monitor contains a single viewport.
2. Using two CR exams and the template you just created, create a model to be used as the basis of the hanging protocol. Detailed steps follow:
   a. Open the exams using the new template (using the **Open With** button in the Manager).
   b. Load the 'current' exam into the left viewport using the master image set icon in the Preview window. (This ensures that for exams with multiple images, all images are loaded into one viewport).
   c. Load the 'prior' exam into the right viewport using the master image set icon.
   d. Adjust each viewport to the display settings (window/level, scale, etc.) that you want to include in the hanging protocol definition.
3. In the Viewer menu, click **Customize | Create Hanging Protocol**. In the box that is displayed:
   a. Enter **CR_1view_priors1up** as the name of the hanging protocol.
   b. If the **HP Level** box is enabled, select User-level or Site-level. For more information, see *User-defined Templates and Hanging Protocols* on page 4.

c. Click **OK**.

4. The Define Hanging Protocol dialog will be displayed. Notice that the viewport on the left monitor is highlighted automatically. The system assumes that this viewport contains the current exam.

5. Use the steps below to verify that the CPT (procedure) and or/modality of the exam have been correctly detected:

   a. In the Case Info tab, verify that 'Current' is the selected Case Type, and that the HP Lookup area displays the correct selection criteria for the current exam.

   b. Verify that the **Disable series processing** checkbox is selected.

   c. Under the HP Lookup area, select an option to indicate if the exam should be used for local reading only, remote reading only, or both.[1]

   d. Click **Save Case Info**. The Viewport Info tab will be displayed. Note that the same viewport remains selected in the Viewer.

6. Use the steps below to verify the display settings derived from the selected viewport:

   a. Verify that the settings in the Viewport Info and More Viewport info tabs are set as desired; change the settings if needed.

   b. Ignore the Specify attributes box. The settings in this box are not relevant to the hanging protocol being defined.

   c. Click **Save Viewport Info**, then click **Next**.

7. Note that the next occupied viewport will be selected automatically.

   - Because this viewport contains a different exam, the Case Info tab will be displayed again.

   - Because you have already specified selection criteria for the current exam, VistARad assumes that this viewport contains a prior exam.

8. Use the steps below to determine what types of exams qualify as matching prior exams.

   a. In the Case Info tab, select **Matching Prior** as the Case Type.

   b. In the Prior Attribute area, set the **Up To** and **Max Priors** boxes as desired.

   c. Leave the Match Type value set to Exact CPT.

   d. Ignore the settings in the Prior Index box—this is only used when more than one prior exam will be displayed concurrently in the Viewer.

---

[1] This setting provides another layer of filtering for sites that route exams. Use 'local' for hanging protocols that are meant for use with non-routed exams. Use 'remote' for hanging protocols meant for use by users reading routed exams from a remote location. Use 'local and remote' for hanging protocols that should be available for both local and remote users. This setting does not prevent any user from selecting any hanging protocol manually.

e Click **Save Case Info**. The Viewport Info tab will be displayed. Note that the same viewport remains selected in the Viewer.

9 Use the steps below to verify the display settings derived from the selected viewport:

a Verify that the settings in the Viewport Info and More Viewport info tabs are set as desired.

b Ignore the Specify attributes box; the settings in this box are not relevant to the hanging protocol being defined.

c Click **Save Viewport Info**, then click **Next**.

10 After saving settings for the last viewport, click **Save HP**.

11 Close the model exams.

12 Test the new hanging protocol as follows:

a Verify that the option to open priors automatically is selected (go to **View | Settings | Hanging Protocol**).

b Open a CR exam that has the same procedure as the exams you used to model the hanging protocol.

c When the exam is displayed, verify that:

- The current exam is displayed in the left viewport.
- The most recent prior is displayed in the right viewport.
- Older priors, if present, can be displayed by clicking the Exam button that appears in the upper right corner of the viewport.

Defining a Hanging Protocol II (CR_1view_priors4up)

The steps below explain how to create a hanging protocol that will display a current CR (x-ray) exam on one monitor and up to four prior exams on the second monitor.

To create this hanging protocol, you will need at least five chest CR exams; the use of a 2-head workstation is assumed.

1 Create a new template where the left monitor contains a single viewport and the right monitor contains four equally-sized viewports.

2 Using the CR exams and the template you just created, create a model to be used as the basis of the hanging protocol. Detailed steps follow:

a Open the exams using the new template (using the **Open With** button in the Manager).

b Load the ‘current’ exam into the left viewport using the master image set icon in the Preview window. (This ensures that for exams with multiple images, all images are loaded into one viewport).

c. Load the 'prior' exams into each viewport on the right monitor using the master image set icon.

d. Adjust each viewport to the display settings (window/level, scale, etc.) that you want to include in the hanging protocol definition.

3. In the Viewer menu, click **Customize | Create Hanging Protocol**. In the box that is displayed:

   a. Enter **CR_1view_priors4up** as the name of the hanging protocol.

   b. If the **HP Level** box is enabled, select User-level or Site-level. For more information, see *User-defined Templates and Hanging Protocols* on page 4.

   c. Click **OK**.

4. The Define Hanging Protocol dialog will be displayed. Notice that the viewport on the left monitor is highlighted automatically. The system assumes that this viewport contains the current exam.

5. Use the steps below to verify that the CPT (procedure) and or/modality of the exam have been correctly detected:

   a. In the Case Info tab, verify that 'Current' is the selected Case Type, and that HP Lookup area displays the correct selection criteria for the current exam.

   b. Verify that the **Disable series processing** checkbox is selected.

   c. Under the HP Lookup area, select an option to indicate if the exam should be used for local reading only, remote reading only, or both.[2]

   d. Click **Save Case Info**. The Viewport Info tab will be displayed. Note that the same viewport remains selected in the Viewer.

6. Use the steps below to verify display settings derived from the selected viewport:

   a. Verify that the settings in the Viewport Info and More Viewport info tabs are set as desired; change the settings if needed.

   b. Ignore the Specify attributes box, the settings in this box are not relevant to the hanging protocol being defined.

   c. Click **Save Viewport Info**, then click **Next**.

7. Note that the next occupied viewport will be selected automatically.

   - Because this viewport contains a different exam, the Case Info tab will be displayed again.

[2] This setting provides another layer of filtering for sites that route exams. Use 'local' for hanging protocols that are meant for use with non-routed exams. Use 'remote' for hanging protocols meant for use by users reading routed exams from a remote location. Use 'local and remote' for hanging protocols that should be available for both local and remote users. This setting does not prevent any user from selecting any hanging protocol manually.

- Because you have already specified selection criteria for the current exam, VistARad assumes that this viewport contains a prior exam.

8. Use the steps below to determine what types of exams qualify as matching prior exams.

   a. In the Case Info tab, select **Matching Prior** as the Case Type.

   b. In the Prior Attribute area, set the **Up To** box to 5 years, and the **Max Priors** box to 4.

   c. Leave the Match Type value set to Exact CPT.

   d. Set the **Prior Index** box to 1—this indicates that the most recent of any prior exams is to be displayed in the currently selected viewport.

   e. Click **Save Case Info**. The Viewport Info tab will be displayed. Note that the same viewport remains selected in the Viewer.

9. Use the steps below to verify the display settings derived from the selected viewport:

   a. Verify that the settings in the Viewport Info and More Viewport info tabs are set as desired.

   b. Ignore the Specify attributes box; the settings in this box are not relevant to the hanging protocol being defined.

   c. Click **Save Viewport Info**, then click **Next**.

10. Repeat Steps 8 and 9 for the three remaining viewports; for each viewport, increment the setting in the Prior Index box to 2, 3 and 4.

11. After saving settings for the last viewport, click **Save HP**.

12. Close the model exams.

13. Test the new hanging protocol as follows:

    a. Verify that the option to open priors automatically is selected (go to **View | Settings | Hanging Protocol**).

    b. Open a CR exam that has the same procedure as the exams you used to model the hanging protocol.

    c. When the exam is displayed, verify that:

       - The current exam is displayed in the left viewport.

       - The four most recent prior exams are displayed in each of the viewports on the right monitor. (Double-click to toggle back and forth between full screen and standard view.)

Editing a Hanging Protocol

This section explains how to edit a hanging protocol. The following properties of a hanging protocol can be edited:[3]

- Display properties for each viewport populated by the hanging protocol.
- The hanging protocol name and level (user or site).
- Prior exam selection attributes.
- "Other related" exam selection attributes.
- "Series processing" and "Enable/disable oldest shown on loading" settings.

The steps below explain how to edit the **CR_1view_priors1up** hanging protocol previously defined in this document. This hanging protocol will be updated to alter the selection criteria used for priors and the window/level settings applied to each viewport.

1. Select **Customize | Edit Hanging Protocol** from the Viewer main menu.
2. In the dialog that displays, select **CR_1view_priors1up** and click **OK**.
   - The Define Hanging Protocol dialog will display, and the Viewport Info tab will be selected.
   - The display area will be replaced by a mockup of the template and viewports defined for the selected hanging protocol, and the leftmost viewport (labeled "Current") is selected.

   Note Because the current exam selection criteria of a hanging protocol cannot be directly edited, the system proceeds directly to the viewport-level settings for the current exam.
3. In the Viewport Info tab, change the settings in the Window/Level area as desired.
4. Click **Save Viewport Info**, then click **Next**.
5. Note that the next viewport (labeled "Matching Prior" in the display area) is selected and that the Case Info tab displays.
6. Change the properties for prior exams as desired, then click **Save Case Info**.
7. The Viewport Info tab will display automatically. Change the window/level settings as desired, then click **Save Viewport Info**.
8. Click **Save HP**.
9. Open an exam with the edited hanging protocol to verify that the changes have been made as expected.

[3] Other hanging protocol properties (such as stages) cannot be edited, but they can be defined by adapting an existing hanging protocol as described in the next section.

Adapting an Existing Hanging Protocol

This section explains how to create a new hanging protocol using an existing one. In this example, a previously created hanging protocol will be used as the basis of a new hanging protocol that uses stages.

A staged hanging protocol lets you present the same set (or subset) of exams in different arrangements. Two examples of when stages might be used include:

- A hanging protocol that has a "with priors" and "without priors" arrangement.
- A hanging protocol for MRI exams with several sequences, where each group of related sequences is shown in a separate stage.

The steps below explain how to create a two-stage hanging protocol, where you will use **CR_1view_priors1up** as the basis of the first stage, and where you will create a new "without priors" view in the as the second stage. (The use of a 2-head workstation is assumed.)

1. Create a template named **2head_1vp** that contains a single viewport that spans both monitors.
   - For information about creating multi-screen viewports, see page 8.
   - This template will be used when you define the *second* stage of your new hanging protocol.
2. Open a CR exam using **CR_1view_priors1up**.
3. In the Viewer menu, click **Customize | Create Hanging Protocol**. In the box that is displayed:
   a. Enter **CR_staged** as the name of the hanging protocol.
   b. If the **HP Level** box is enabled, select User-level or Site-level. For more information, see *User-defined Templates and Hanging Protocols* on page 4.
   c. Click **OK**.
4. When the Define Hanging Protocol dialog displays, do the following to create stage 1 of the new hanging protocol:
   a. Click **Save Case Info**, then click **Save Viewport Info** to save settings for the first viewport.
   b. Click the **Case Info** tab, then repeat the step above to save settings for the second viewport.
   c. Click **Save Stage**. The Define Hanging Protocol will close and the "Multi-stage HP Creation In Process" box will display. (This box will be used in a future step.)

5. Model the "current only" stage of the hanging protocol as described below:
   a. Clear each occupied viewport by clicking  .
   b. In the upper-right corner of the Viewer window, locate the Template box and click **Select**.
   c. Select the **2head_1vp** template that you created in Step 1, then click **OK**.
   d. In the Preview window, use the Master Image set thumbnail to load the current exam into the Viewer. If the current exam contains multiple images, the first image should appear on the left monitor, and the second image should appear on the right monitor.
   e. Adjust image properties as desired.
6. In the "Multi-stage HP Creation In Process" box, click **Next Stage**.
7. When the Define Hanging Protocol dialog displays, it will show the Viewport Info tab with settings for the second stage. Verify that the viewport settings are correct.
8. Click **Save Viewport Info**.
9. Select the Case Info tab and enable the **Use this stage when priors are not available** checkbox.
10. Click **Save Case Info**, then click **Save HP**.
11. Test the new hanging protocol as follows:
    a. Verify that the option to open priors automatically is selected (go to **View | Settings | Hanging Protocol**).
    b. Open a CR exam using the new **CR_staged** hanging protocol.
    c. When the exam is displayed, verify that the correct stage was selected based on the presence or absence of priors.
    d. Use the **Stage** control in the upper right side of the screen to step between each stage.
    e. In the first stage, verify that the current exam is displayed in the left viewport and any priors are displayed in the right viewport.
    f. In the second stage, verify that the current exam only is displayed using the **2head_1vp** template.